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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/015,616 01/29/98 NORVELL

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EXAMINER

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ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 10/07/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)
	09/015,616	Norvell et al.
	Examiner	Group Art Unit
	Cheryl Juska	1771

Responsive to communication(s) filed on _____.

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

Claim(s) 1-53 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

Claim(s) _____ is/are allowed.

Claim(s) 1-53 is/are rejected.

Claim(s) _____ is/are objected to.

Claims _____ are subject to restriction or election requirement.

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on _____ is/are objected to by the Examiner.

The proposed drawing correction, filed on _____ is approved disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) _____.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). 5 and 6

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

- a. The claimed 'abrasion to leakage values' as recited in claims 1-9, 27, 31-34, 36-38, and 41-43 are not supported by the specification.
- b. The claimed 'moisture vapor transmission rates' as recited in claims 23-26 are not supported by the specification.
- c. In claim 14, the limitation that the flock particulate is cellulose acetate, rubber, or leatherboard is unsupported by the specification. (See page 8, lines 21-34.)
- d. In claim 15, the limitation that the substrate is further comprised of polyacrylonitrile is not supported by the specification. (See page 7, line 21-page 8, line 5.)
- e. In claim 16, the limitation that the flock particulate is comprised of copolymers, fluorelastomers, block copolymers, copolyesterethers, copolyetheresteramides, olefins, copolyetherpolyesters, copolyetherurethanes, polycarbonates, polymethylmethacrylate, polyvinylchloride, polyvinylidene fluoride, polysulfones, polystyrenes, polyolefins, or polyacrylonitriles is not supported by the specification. (See page 8, lines 21-34.)

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f. In claim 17, the limitation that the adhesive layer is comprised of silicones is not supported by the specification. (See page 10, lines 23-33.)

g. In claims 28-30, the limitations that the water and wind resistant, breathable material is comprised of polyesters, polyurethanes, polyolefins, copolyetherpolyester, or polyether polyurethane is not supported by the specification. (See page 9, lines 13-16 and the working examples.)

2. The disclosure is objected to because of the following informalities: the recitation to US Patent 5,375,441 on at least page 22, line 6 and page 28, line 17 should read "5,376,441." Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 28-30 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 28-30 are limit the substrate to a water and wind resistant, breathable material which is not ePTFE. However, the specification is directed solely to flocked articles comprising ePTFE. Thus, said claims are not enabled by the specification.

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5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 10-16, 21, and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claims 10-13, 15, 21, and 22 are indefinite since the spacial location of the ‘further material’ is not defined. Thus, the structure of the invention is not clear.

8. Claims 13 and 14 are indefinite for the limitation to “vinyl,” which is a radical not a substrate material.

9. The limitation to “block copolymers” and “olefinics” in claims 15 and 16 are indefinite because the scope of these terms is infinite. (It is noted that the specification teaches “block copolymers such as styrenics, copolyesterethers, copolyetheresteramides, and olefinics” as suitable substrate materials at page 7, lines 30-31, but not the broad disclosure of ‘block copolymer’ and ‘olefinics.’)

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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11. Claim 53 is rejected under 35 U.S.C. 102(b) as anticipated by US Patent 5,026,591 issued to Henn et al.

Claim 53 is drawn to a flocked article comprising a substrate of expanded PTFE (ePTFE) and at least one layer of flock particulate attached to at least a portion of said ePTFE to form a flocked surface, wherein at least a portion of the flock particulate stands on end.

First, it is noted that, for the purpose of examination, the term “flock particulate” is limited to the description found at 8, lines 11-20 of the specification.

Henn teaches a working example of a polyester/cotton blend woven fabric laminated to an ePTFE substrate with a hot-melt hydrophilic adhesive coating of polyurethane thereon (col. 20, lines 49-61). Cotton fiber flocking is adhered to the coating of said laminate. The flocked laminate is tested to have a moisture vapor transmission rate (MVTR) of 19,000 gm/m²/24 hrs. Another working example teaches a flock of rayon fiber and a MVTR of 20,500 gm/m²/24 hrs (col. 20, line 63-col. 21, line 7).

Although Henn does not explicitly teach that ‘at least a portion’ of the flock of the working examples ‘stands on end,’ Applicant is given Official Notice that this limitation is inherent to articles flocked with fibers. Thus, it can be seen that Henn clearly anticipates Applicant’s claim 53.

Claim Rejections - 35 USC § 102/103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1-11, 13-15, 17, 18, 22-26, and 49 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over US Patent 5,026,591 issued to Henn et al.

Applicant claims a flocked article comprising a substrate of expanded polytetrafluoroethylene (ePTFE) and at least one layer of flock particulate attached to at least a portion of said ePTFE substrate. Applicant also claims specific 'abrasion to leakage values' in claims 1 and 3-9. Claim 2 limits the flocked article to comprise an adhesive layer for attaching said flock to said ePTFE. Claims 10, 11, 13, and 15 limit the substrate to further comprise another material, including woven and nonwoven fabrics, paper, and polyesters and polyamides. Claim 14 limits the layer of flock particulate to a Markush group including cotton fibers. Claim 17 limits the adhesive to a select number of compounds, including urethanes, while claim 18 limits the adhesive to be a continuous coating. Claim 22 limits the ePTFE to further comprise a hydrophilic coating on at least a portion thereof. Claims 23-26 limit the flocked article to have specific MVTR values. Claim 49 limits the flocked article of claim 1 to be in the form of a water resistant, wind resistant, breathable garment.

As previously discussed Henn teaches two working examples of ePTFE substrates which have a flocked surface and MVTR values within the limitations claimed by the Applicant. The hot melt hydrophilic polyurethane continuous coating acts as an adhesive for the flock material. Henn

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also teaches that the ePTFE substrate may include other materials, such a woven or nonwoven fabric and paper (col. 3, lines 22-28). Specific examples of other substrate materials include a woven poly/cotton blend fabric and a spunbonded polyamide nonwoven (col. 11, lines 35-40). The invention of Henn is suitable for use in waterproof, breathable products, such as garments, shoes, or gloves (col. 3, lines 35-37).

Henn does not explicitly teach ‘abrasion to leakage values.’ However, it is reasonable to presume that said values are inherent to the invention of Henn. Support for said presumption is found in the analogous (a) substrate materials, in particular ePTFE, (b) flocking materials, and (c) MVTR values. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. In the alternative, the presently claimed ‘abrasion to leakage values’ would obviously have been provided as a result of the chosen substrate and flocking materials of the Henn invention. *In re Best*, 195 USPQ 433, footnote 4. Thus, claims 1-11, 13-15, 17, 18, 22-26, and 49 are rejected as being anticipated by, or in the alternative, as being obvious over the cited Henn patent.

14. Claim 12 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being unpatentable over the cited Henn patent.

Claim 12 limits the fabric of the substrate of claim 10 to be a suede, pile, or fleece surface. Henn doesn’t specifically teach said fabrics. However, said fabrics are well known for use in the utilities described by the Henn patent. For example, gloves are commonly lined with a fleece or pile fabric or have a suede surface. Additionally, garments and shoes are known to also employ

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said surfaces. Hence, it is reasonable to presume that the disclosure of the Henn patent would inherently include the claimed fabrics, as supported by the previous statements. *In re Fitzgerald*, 205 USPQ 594. In the alternative, the presently claimed fabrics would obviously have been provided as a result of the utility of the Henn invention as garments, shoes, or gloves. *In re Best*, 195 USPQ 433, footnote 4. Thus, claim 12 is rejected.

Claim Rejections - 35 USC § 103

15. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Henn patent as applied to claim 1 above, and further in view of EP 455 394 issued to Lumb et al.

Claim 16 limits the flock particulate to a Markush group including polyesters, polyethylenes, polypropylenes, and aramids. Henn only teaches exemplary flocking fibers of cotton and rayon. However, it is well known in the art to employ other fibers as flock. In particular, Lumb teaches a wind and water resistant, breathable, flocked fabric (abstract). Lumb teaches suitable flocking includes nylon, cotton, rayon, acrylic, polyester, wool, or a combination thereof (col. 6, lines 14-21). Thus, it would have been obvious to one skilled in the art to substitute another material, such as polyester or nylon, for the cotton or rayon flock of the Henn invention. Motivation to do so would be incorporate the inherent properties of each material, or to reduce cost by choosing a cheaper material. Therefore, claim 16 is rejected as being obvious over the cited prior art.

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16. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Henn patent.

Claim 19 limits the adhesive layer to be a discontinuous layer of adhesive. Applicant is given Official Notice that discontinuous adhesive layers, such a dot pattern, are well known in the art. Such discontinuous adhesive layers are typically employed to prevent the adhesive layer from forming a barrier layer. Thus, it would have been obvious to one skilled in the art to form a discontinuous adhesive layer in the invention of Henn. One would be motivated to do so to in order to maintain the breathability of the invention. Therefore, said claim is rejected.

17. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Henn patent as applied to claim 1 above, and further in view of the cited Lumb patent.

Claim 20 limits the adhesive layer to be a foamed layer of adhesive. Foam adhesive layers are well known in the art of flocking. For example, Lumb teaches the use of a foam adhesive to adhere flock in forming a breathable fabric. Foaming of the adhesive increases the porosity of said adhesive, thus making said adhesive breathable. Thus, it would have been obvious to one skilled in the art to employ a foamed adhesive layer. One would be motivated to do so to enhance the breathability of said flocked fabric. Therefore, said claim is rejected.

18. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Henn patent as applied to claim 1 above, and further in view US Patent 5,376,441 issued to Wu et al.

Although Henn does not explicitly teach an oleophobic coating on the ePTFE substrate, said coatings are well known in the art. Specifically, Wu teaches the use of an oleophobic coating

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on an ePTFE substrate in order to produce a breathable article, such as a garment, with enhanced hydrophobic and oleophobic properties (col. 4, lines 42-48). Thus, it would have been obvious to one skilled in the art to employ an oleophobic coating to the invention of Henn, in order to enhance the hydrophobic and oleophobic properties of the invention. Therefore, claim 21 is rejected.

19. Claims 35-40, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Henn patent.

Independent claim 35 differs from the previous claims in that the substrate is flocked on both sides thereof. Although Henn does not explicitly teach flocking on both sides of the substrate, it is taught that the coating which adheres the flocking may be present on both sides of the substrate (col. 6, lines 49-51). Hence, it would have been obvious to one skilled in the art to flock both sides of the substrate. Motivation to do so would be to provide a double-faced fabric for added comfort and/or aesthetics. Therefore, said claims are rejected as being obvious over the cited patent.

20. Claims 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Henn patent alone or in view of the cited Wu patent.

Independent claim 41 is drawn to a flocked article comprising an ePTFE substrate coated with a water resistant, moisture vapor permeable material and a layer of flock particulate coated thereon.

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As previously discussed, Henn teaches an ePTFE substrate with a hydrophilic polyurethane coating and flocked fibers thereon. Said polyurethane coating is taught to be moisture vapor permeable. Additionally, the oleophobic coating of Wu is taught to be hydrophobic and oleophobic while still being breathable. Thus, said claims are rejected.

21. Claims 27, 31-34 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Henn patent.

Independent claim 27 is drawn to a substrate having a first side and a second side, wherein said first side comprises a water resistant, wind resistant, breathable material, and wherein said first side of said substrate has a layer of flock thereon.

As previously discussed, the ePTFE substrate of the Henn invention is well known to be a water and wind resistant, breathable material. Thus, said claims are rejected over the cited Henn patent.

22. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Henn patent alone, or in view of US Patent 4,194,041 issued to Gore et al.

Claim 28 limits the first side of the substrate to be a polyester, polyurethane, or polyolefin.

Henn teaches other suitable substrates for the invention include a fabric with a layer of a scaffold material, such as ePTFE or microporous polypropylene (col. 11, lines 50-58).

Furthermore, Gore teaches microporous hydrophobic layer, such as ePTFE or microporous polypropylene (col. 5, lines 7-15). Hence, said claim is rejected.

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23. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Henn patent, in view of US Patent 4,918,981 issued to Gore and US Patent 5,532,037 issued to Aumann.

Claim 29 limits the first side of the substrate to be copolyetherpolyester.

Although Henn does not explicitly teach a copolyetherpolyester substrate, said substrate is well known in the art as an equivalent to ePTFE. For example, Gore '981 and Aumann teach equivalent materials are ePTFE and copolyetheresters (Gore '981, col. 4, lines 17-24 and Aumann, col. 2, lines 30-37. Thus, the selection of a copolyetherpolyester as a water and wind resistant, breathable substrate material would be within the level of ordinary skill in the art.

24. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Henn patent, in view of US Patent 5,349,705 issued to Ragan.

Claim 30 limits the first side of the substrate to be polyether polyurethane.

Although Henn does not explicitly teach a polyether polyurethane substrate, said substrate is well known in the art as an equivalent to ePTFE. For example, Ragan teaches equivalent materials are ePTFE and polyether polyurethane (Ragan, col. 3, lines 61-68). Thus, the selection of a polyether polyurethane as a water and wind resistant, breathable substrate material would be within the level of ordinary skill in the art.

25. Claims 44-48 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Henn patent, in view of US Patent US 5,262,234 issued to Minor et al.

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Henn does not explicitly teach flocking materials other than cotton or rayon. However, it is well known in the art of flocking that a wide variety of fibers may be employed as flock. Additionally, Minor teaches of a fiber made from ePTFE which may be used as a flocking material. Hence, it would have been obvious to one skilled in the art to substitute the flock material of the Minor patent for the flock material of the Henn invention. Motivation to do so would be the added benefits of having an ePTFE flocked surface, such as the conductive properties of such flock. Therefore, said claims are rejected as being obvious over the cited patents.

Conclusion

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl Juska whose telephone number is (703) 305-4472. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris, can be reached at (703) 308-2414. Fax numbers for this Group are (703) 305-3601 and (703) 305-7718.

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September 28, 1999

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